TITLE

IDENTIFIKASI STRUKTUR LAPISAN BATUAN BAWAH PERMUKAAN KAWASAN JEMBATAN LAMNYONG MENGGUNAKAN METODE GEOLISTRIK RESISTIVITAS 2D

ABSTRACT

Kata Kunci: Jembatan Lamnyong, Metode Resistivitas, Konfigurasi Wenner-Schlumberger, Software Res2Dinv

ABSTRACT
A research has been conducted around the foundation of Lamnyong Bridge, Syiah Kuala District, Banda Aceh City. The research used geo-electrical resistivity with Wenner-Schlumberger configuration. This study purposed to determine the physical characteristics (resistivity) of subsurface layer structure of Lamnyong bridge construction. The data collecting process was conducted on two parallel tracks cutting the bridge and each track was 220 meters with a space of 4 meters. The electrode used was 56 electrodes and used Superstring R8 resistivity meter instrument. The data was analyzed by using Res2Dinv software to obtain the model of 2D resistivity section of subsurface layer structure. The result of interpreted data obtained from two tracks showed that the research area was generally divided into three rock layers with resistivity value ranging from 1 â€“ 22,4 Î©m. The first layer consisted of clayey silt with a resistivity value 5 - 15 Î©m. The second layer consisted of clay with resistivity values ranging from 1 - 4 Î©m. The third layer consisted of sand mixed with clay (as hard layer) with resistivity value in the range of 5 - 10 Î©m. In addition, the existence of foundation was found at depth 6 - 8 m with resistivity value 20 - 22,4 Î©m.

Keywords: Lamnyong Bridge, Resistivity Method, Wenner-Schlumberger Configuration, Res2Dinv Software